WHAT IS CLAIMED IS:

1. A process, comprising:

illuminating a Bragg grating of a distributed Bragg reflector (DBR) laser with light while the DBR laser is both supplied a tuning current and not lasing; and

performing an action on the DBR laser responsive to a wavelength of a Bragg peak in a portion of the light reflected by the Bragg grating and a value of the tuning current supplied during the illuminating.

2. The process of claim 1, further comprising:

biasing a Fabry-Perot cavity of the laser to absorb incident light during the illuminating.

3. The process of claim 1, wherein the illuminating includes supplying another current to the DBR laser, the another current causing spontaneous emission of light from the DBR laser without causing lasing.

4. The process of claim 1, wherein the action includes changing the value of the tuning current to compensate for age-induced wavelength drift in the DBR laser.

5. The process of claim 1, wherein the action includes finding a functional relationship that associates new values of the tuning current with old values of the tuning current, the associated new and old values capable of producing the same Bragg peak wavelengths in light reflected by the Bragg grating at earlier and present times, respectively.

6. The process of claim 5, further comprising:

selecting an output wavelength of the DBR laser previously produced in response to one of the old values of the tuning current; and

applying one of the new values of the tuning current to the DBR laser in response to the functional relationship associating the ones of the new and old values.

7. The process of claim 1, wherein the performing an action includes determining a quantity predictive of whether an output wavelength of the DBR laser will shift more than a selected amount during a selected lifetime of the DBR laser.

8. The process of claim 7, wherein the performing an action includes marking the DBR laser as disqualified with respect to stability against wavelength drift in response to the value of the quantity predicting that the output wavelength will shift more than the selected amount.

9. The process of claim 7, wherein the performing an act includes marking the DBR laser as qualified with respect to stability against wavelength drift in response to the value of the quantity predicting that the output wavelength will not shift more than the selected amount.

10. The process of claim 7, wherein the quantity is a characteristic of a relationship between age-induced shifts to tuning current values and Bragg peak wavelengths produced in light reflected by the Bragg grating for the tuning current values.

11. The process of claim 7, further comprising:

determining a relationship between values of a Bragg peak wavelength in light reflected off the Bragg reflector and values of a tuning current applied to the DBR laser;

then, burning in the DBR laser for a preselected period; and

wherein the act of illuminating is performed after the burning in.

12. The process of claim 1, wherein the illuminating includes generating the illuminating light from a semiconductor junction by spontaneous emission.

13. The process of claim 1, further comprising:

at a time prior to the illuminating, measuring values of Bragg peak wavelengths and values of the tuning current capable of causing the Bragg grating to produce the

measured values of Bragg peak wavelengths.

14. The process of claim 13, further comprising:

determining a portion of an operating characteristic that relates output wavelength of the DBR laser to a value of the tuning current capable of producing the output wavelength at the time prior to the illuminating.

15. The process of claim 14, wherein the performing an action further includes comparing first and second values of the tuning current capable of causing the Bragg grating to produce reflected light with peaks of the same wavelength at the time of the illuminating and at an earlier time, respectively.

16. A process for operating a wavelength-tunable DBR laser, comprising:

operating the DBR laser at a first output wavelength;

measuring a value of a tuning current causing the DBR laser to operate at the first output wavelength;

calculating a new value of the tuning current capable of operating the DBR laser at a second output wavelength based in part on the measured value of a tuning current.

17. The process of claim 16, wherein the calculated new value compensates for age-induced wavelength drift.

18. The process of claim 16, wherein the calculating includes calculating a parameter that relates age-induced shifts to tuning currents to Bragg peak wavelengths of a tunable Bragg reflector of the laser.

19. The process of claim 16, wherein the first and second output wavelengths correspond to first and second operating modes of the DBR laser.

20. The process of claim 16, wherein the calculating includes solving one or more equations relating a pre-aging values of tuning current, an associated Bragg peak

wavelength, and the measured value of the tuning current.

21. An apparatus, comprising:

a DBR laser having an electrical terminal for applying a tuning current;

a controller coupled to apply a tuning current to the terminal and capable of applying a new value of the tuning current to cause the DBR laser to jump to a new operating mode, the controller configured to determine the new value based in part on a measured pre-jump value of the tuning current.

22. The apparatus of claim 21, further comprising a current measurement device coupled to measure values of the tuning current applied to the DBR laser and to send signals to the controller indicative of the measured values.

23. The apparatus of claim 21, wherein the laser controller is further configured to stabilize the DBR laser against age-induced wavelength drift based on optical feed back from the laser.

24. The apparatus of claim 22, wherein the controller is configured to compensate for age-induced current drift in the determination of the new value.

25. A system, comprising:

a DBR laser; and

a spectrum analyzer positioned to receive light reflected by a tunable Bragg grating of the DBR laser;

a processor coupled to receive data on reflection spectra of the Bragg grating from the spectrum analyzer and data on values of tuning currents associated with the reflection spectra, the processor configured to determine a functional relation between Bragg peak wavelengths and the values of the tuning currents from the data.

26. The system of claim 25, wherein the DBR laser includes one of a spontaneous emission source and a quasi-white-light source capable of illuminating the

Bragg grating with broadband light, the optical amplifier section being external to a Fabry-Perot cavity of the DBR laser.

27. The system of claim 25, wherein the processor is programmed to mark the DBR laser for discard in response to the functional relation predicting that the relation between the Bragg peak wavelengths and values of the tuning current will change within a predetermined lifetime.

28. The system of claim 25, wherein the processor is programmed to change a value of the tuning current corresponding to a selected output wavelength in response to the data indicating a change in the relation between the Bragg peak wavelengths and the values of the tuning currents.